Detection and sensor systems

Learning status, condition, needs, concerns, actions and behaviors of all assets & participants

Response, recovery, and reconstitution

The tools, methods and plans for those who must respond to event and rebuild

New and emerging threats and vulnerabilities

Discover from the COP patterns, tools, capabilities and devices we have not previously seen.

Next generation detection and reporting framework

Victim discovery, 3-D situation assessment, deployable sensors, safe access and egress

Advanced infrastructure architecture and systems design

Provide dynamic situational awareness and real-time interpretation

Examine intent, monitor & mine data to find new patterns

New high volume communication systems

National Common Operating Picture

Knowing who is where, their roles & permissions and what they may carry

Security of entry portals and access to assets

Automated surveillance, eliminate false readings

Behavior of operators, responders, owners, and victims

Anticipating the reactions and actions of those involved in an event

Human and social issues

Real-time feeds on status of protection & control

Anticipate intention, retract duties

Real-time National feeds to decision support system

Minimizing the impact of any threat and feeding the COP with data about real status of assets

Protection and prevention

Sensing rogue behavior in a trusted resource

Insider threats

Providing tools to aid responders and leaders in handling a tragedy with full awareness of events

Analysis and decision support technologies

Secure National Communication Network

Detection and sensor systems
Creation of software agents to monitor security, detect cyber intrusion to network

Response, recovery, and reconstitution
Mitigation of attacks, reconstruction after damage

Seamless next generation, redundancy, secure backup

Sense, disable, quarantine, and dissect network intruders

New and emerging threats and vulnerabilities
Anticipating new threats with solutions adversaries have not considered; negate legacy gaps

Advanced infrastructure architecture and systems design
Impenetrable computing core

Develop commercial equal of countermeasures for any new system

Develop understanding of optical, organic, and quantum systems

Advanced monitoring of actions, habits, and roles of all actors in the cyber network
Security of entry portals and access to assets

Eliminate ability for unauthorized actions

Develop multi-sense interfaces to communicate with decision makers

Human cognitive capacity to manage data volume
Human and social issues

Build best protection possible for legacy systems, anticipate new

Anomaly discovery systems

Activity tracing, characterizing, forensic and attribution

Devise threat mitigation and countermeasures for proactive protection
Protection and prevention

Make dynamic role-based protection intrinsic
Insider threats

Management of systems & network with dynamic roles
Analysis and decision support technologies

Detection and sensor systems

Providing sensors that integrate data, examine at systems level, sense errors and guide repairs

Response, recovery, and reconstitution

Incorporate replacement leap technologies in stabilization and recovery construction

Develop controlled collapse, manage losses, expedite demolition and reconstitution

New and emerging threats and vulnerabilities

Sense and develop defense against new threats as an intrinsic part of operations

Next generation SCADA systems share duties, redistribute loads

Advanced infrastructure architecture and systems design

Build systems capable of designing own replacement

Inherent lessons learned adaptation and anticipation for minimum reduced capacity

Incorporate smart materials, embedded sensors, and monitoring

Resilient, Self-Healing, Self-Diagnosing Infrastructure

Create systems that inherently learn, prove, mutate and become better at recognition & control

Security of entry portals and access to assets

Build secure role tailored controls that change per circumstances

Creative, multi-sense, intuitive prevention and management of events

Fully effective, efficient human intervention for operations and emergencies

Human and social issues

Extreme strength materials, self-repairing of fractures, reactive energetic reflectors

Develop shielding & sacrificial systems to enhance protection & maximize resilience

Protection and prevention

Role-based controls arrest while monitoring

Provide graceful stealth to maneuver a threat actor to show full intentions while maintaining real asset integrity

Insider threats

Select optimum actions to prevent shut-down and minimize losses

Advanced modeling for emerging materials and innovative designs, immune to advancing threats

Analysis and decision support technologies